Solar Eclipse Newsletter

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The **Solar Eclipse Newsletter** is a monthly newsletter about Solar Eclipses edited by Patrick Poitevin. Financial support from ***Rainbow Symphony.*** The author started the SENL in November 1996.

The **Solar Eclipse Newsletter** is only available on NASA's web page of ***Fred Espenak*** and since October 1998. See:

http://www.MrEclipse.com/SENL/SENLinde.htm

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Further information or remarks? Please write to the editor ***Patrick Poitevin.***

10 December 2000

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General

From the editor

Please find herewith the Solar Eclipse Newsletter of September 2000 which covers all solar eclipse related messages of August 2000.

1860 Books

From: J.P. van de Giessen <jpvdgiessen@gelrevision.nl> To: <SOLARECLIPSES@AULA.COM> Sent: Friday, August 25, 2000 6:00 AM Subject: [SE] SE 1860 Astronomical Books

Ls, I found some interesting books (online) about the eclipse of 1860.

Falak, Mamd Amad amd al-; Rapport à son altesse Mohammed Saïd, vice-roi d'Egypte: sur l'éclipse totale de soleil observée à Dongolah (Nubie), le 18 juillet 1860 (http://gallica.bnf.fr/scripts/ConsultationTout.exe?O=n095074)

Márquez de Paula, Francisco; Memoria sobre el eclipse de sol de 18 de julio de 1860 (http://gallica.bnf.fr/scripts/ConsultationTout.exe?O=n094991)

Or see my webpage Astronomical Books Online (http://home.gelrevision.nl/~jpvdgies/indexbooks.html), section Other Works/Historical JPvdGiessen

Binoculars for Eclipses

From: Sheridan Williams <sheridan@clock-tower.com> To: <SOLARECLIPSES@AULA.COM> Sent: Monday, August 07, 2000 10:12 PM Subject: [SE] Binoculars for eclipse watching

I've just been trying the Canon 15 x 45 Image Stabilised binoculars that I've just bought ready for the eclipse next June. I think they are stunning. Has anyone else tried them and what do they think? Sheridan Williams

From: <JohnLX200@aol.com>

I also recently got the 15x45 and agree with your assessment. They'll definitely be coming along to Zambia with me, among other things. John Hopper

From: Jean-Paul Godard <jpgodard@cybercable.fr>

Has any one tried this kind of stabilised devices over dark sky for star watching? Does it work properly with low light?, does it work (stabilisation) looking at a star, jupiter, the moon? This interesting point (for astronomers) does not appear to be discussed anywhere! Cordialement Jean-Paul Godard

From: Manfred Rudolf <mrudolf@epo.org>

Good morning Jean-Paul, in the July issue of Sky+Telescope you can find a test report about image-stabilized bino's, including the Canon 15x45. The test report can also be seen from skypub's homepage:

http://www.skypub.com/resources/testreports/binoculars/0007isbinos.html

Have a look, quite interesting ! regards, manfred

From: Olivier Staiger <olivier.staiger@span.ch>

update: Canon now has 2 new models. The first were the 10x30, 12x45, 15x45. now new: 15x50 and 18x50 , both also with I.S. The cost of the 15x45 has gone down since the new models arrived. I would certainly very much love to buy such wonderfull binos. Some day I probably will. Meanwhile, I recommend the very compact Pentax 16x24 . 16 times magnification in your palm ! Get to Zambia with just a small backpack carry-on luggage ! Klipsi

From: Madden <iluvelx@netacc.net>

Very revealing article. I can't believe they left a tripod mount off of the 15x45's. Uses slightly more power too. madden/rochester

From: Assoc Prof J R Huddle <huddle@nadn.navy.mil>

I've used the Canon 10 x 30 IS for looking at sunspots, a lunar eclipse, planets and asterisms. They work well under all these conditions. The first time I used them, I looked at Jupiter. It took me a few minutes to realise that you have to hold the button down to engage the IS - this is apparently a power management feature. Without engaging the IS, Jupiter looked like you would expect at 10 power, but when I pressed the button to engage the IS, three of Jupiter's moons popped into view! It blew me away. Asterisms, like the Pleiades & Hyades, are stunning. The optical quality is quite good, and the eye relief is sufficient for people like me who need to wear glasses even when using binox. I think the larger models are a bit heavy; I would prefer to have a tripod when using them, but then what would be the point of having IS? The weight may not bother other people; you have to try them for yourself. IS may be the next "Big Thing" for eclipse enthusiasts. Fujinon makes an image stabilized model, but I have not tried them. I

think they were quite expensive. Jim Huddle

Book Eclipse Times

From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, August 29, 2000 3:48 PM Subject: [SE] Book "... Eclipse Times by Early Astronomers"

Several weeks ago, someone on this mailing list reported on a book titled: "Observations and Predictions of Eclipse Times by Early Astronomers" by J.M. Steele

I've lost my original message on this. Can anyone tell me who the publisher is, and the address/telephone so that I can order a copy? Thanks, Fred Espenak

From: Dale Ireland <direland@drdale.com>

It is by Kluwer Academic Pub; ISBN: 0792362985 It is available from Amazon.com at

http://www.amazon.com/exec/obidos/ASIN/0792362985/qid%3D967563252/103-067399 4-3966202 Dale Ireland

From: janita hill <janitah@senet.com.au>

Another book SE folk may be interested in is: "Eclipse - the celestial phenomenon which has changed the course of history". Written by yet another Steel - Duncan Steel (presently Professor at Salford University, Manchester) Forward by Paul Davies This was published in 1999 by Headline Book Publishing, ISBN 0 7472 7385 5 London, for 12 pounds 99p. Cover notes: 'Duncan Steel is a space researcher with a special interest in the dynamics of solar system objects and the effects of celestial events on ancient civilisations. His first book, "Rogue Asteroids and Doomsday Comets", was the first popular book on the asteroid and comet impact hazard and was responsible for the rash of television documentaries and Hollywood films on the subject. 'Since the dawn of time, eclipses have been perceived as peculiarly portentous events. Whether signs of divine displeasure or augurs of good fortune, the ability to predict their occurrence has been an important one throughtout history. Stonehenge may well have been built for this very purpose, and the ancient Babylonians, Egyptians and Greeks all set great store by keeping accurate records of these heavenly phenomena. Christopher Columbus, secure in the knowledge that an eclipse would be visible on 29 February 1504, was able to use this against the native Americans as physical proof that God was angry with them. More recently, the eclipse of 1919 was used to prove part of Einstein's theory of relativity once and for all. The pattern which eclipses follow - a cycle, called the saros, lasting some 18 years and 11 days - was calculated thousands of years ago, but it is only with the advent of modern computers that it has been possible to analyse it fully. Furthermore, science has only just begun to realise the many unique research opportunities which an eclipse provides, whether for studying the upper layers of the sun and the atmosphere of the earth, or the effects of such events on human psychology. These once-in-a-lifetime happenings hold a powerful fascination for us all, and Duncan Steel's book explains everything you will ever need to know about eclipses, their science and their significance to humankind.' (The book includes two of Fred Espenak's maps). Duncan Steel has since written a further book "Marking Time" published by John Wiley and Sons ISBN 0 471 29827 1. "This brilliant book explores in depth the measuring on time since the beginning of human history. Steel has done an amazing amount of research on this subject, including the different duration of the hours of the day and the night in Egyptian times and the many adjustments of the calendar which have become necessary over the centuries. I was fascinated to learn that the calendar adjustments could be made much more logically by moving the

zero longitude to 77 degrees W. This would certainly please the USA! Washington DC is in the vicinity. England, Steel says, sent exploration expeditions in the 16th century to Virginia for the purpose of establishing this longitudinal zero." Review by M. O'Leary cheers, Janita Hill

Color Imaging

From: Eric Pauer <pauer@sanders.com> To: Solar Eclipse Mailing List <solareclipses@aula.com> Sent: Friday, August 11, 2000 7:30 PM Subject: [SE] High Dynamic Range Color Imaging

In the course of my work, I recently saw a demonstration of a very interesting video camera called the High Dynamic Range Color (HDRC) Imager, developed by Institute for Microelectronics Stuttgart (IMS), in Germany. e HDRC camera uses a logarithmic compression technique on a pixel by pixel basis before quantization (10-bits), giving it effectively 120 dB of dynamic range (one million to one). In short, it operates in much the same way as the human eye.

The IMS folks were able to point the camera directly at the sun (no filter) and we saw a white disk for the sun, and blue sky/clouds elsewhere in the same image. Quite amazing! Of course I asked if they attempted to video the 11 Aug 1999 total solar eclipse, which passed directly over Stuttgart. They had six HDRC cameras in and around Stuttgart chasing holes in the clouds. Only one camera got any view of the corona, and it was through thin to moderate cloud cover (unfortunately). They connected the HDRC to a 400 mm FL (f/5.6) telescope, and shot 15 frames/second. They have video frames of the eclipse on their website: http://www.ims-chips.de/ A PDF file detailing the HDRC and its specifications can be downloaded from: http://www.ims-chips.de/media/products/hdrc/hdrc_Basics.pdf

I think that the cameras cost about $3,000 US so they are pricey. Eric

P.S. It was just one year ago that many of us were fortunate to have witnessed the last total solar eclipse of the millennium. Time sure flies!

From: Dale Ireland <direland@drdale.com>

the page with the images is http://www.ims-chips.de/pages/products/vgacamera.htm

Compass Extremes

From: Rigel (Peter Tiedt) <rigel@stars.co.za> To: Solar Eclipse Mailing List <SOLARECLIPSES@AULA.COM> Sent: Friday, August 25, 2000 8:16 PM Subject: [SE] Compass Extremes of Moonrise and Sunrise

Once again this tyro turns to the list for help ..... - and (as usual) will be grateful .....

How can I calculate the (compass) extremes of sunrise and moonrise for a given location?

I am trying to determine the furthest south the moon (or sun) can rise and set for my location and a few others ... Many thanks Peter

From: Evan Zucker

Long ago I wrote two DOS programs called SunTimes and MoonTimes, that calculate the daily circumstances of the moon and sun a month at a time for a given location. The circumstances include rise and set azimuths. You can very quickly display each month of the year and scan the azimuth columns to discern the extreme azimuths. I realize this is not the completely automated procedure you may have had in mind, but it works. These programs used to be on the market, but they're not very commercially viable in today's Windows market. However, I still use them all the time. Evan H. Zucker

From: Ing. Francisco Guadarrama Sánchez

Dear Sr. Where can we get your SunTimes and MoonTimes DOS programs ? Thanks a lot for your

help. Francisco Guadarrama Sanchez

Delta T

From: Jean Meeus <JMeeus@compuserve.com> To: Patrick Poitevin <Patrick_Poitevin@hotmail.com> Sent: Saturday, August 19, 2000 10:31 AM Subject: Delta T

Here are the values of Delta T since the beginning of this year :

2000
Jan 1 63.83 seconds
Feb 1 63.85
Mar 1 63.88
Apr 1 63.91
May 1 63.94
Jun 1 63.97
Jul 1 63.98

The yearly increase continues to decrease slowly. From 1998 Jan 1 to 1999 Jan 1, the increase was 0.50 second. From 1998 September 1 to 1999 September 1, it was 0.38 second. From 1999 July 1 to 2000 July 1, it is only 0.31 second. Jean Meeus

Eclipse Photos

From: Dale Ireland <direland@drdale.com> To: Solar Eclipse List <SOLARECLIPSES@AULA.COM> Sent: Wednesday, August 02, 2000 6:33 AM Subject: [SE] eclipse photos

Hi I have posted some images from the eclipse on my temporary page. One very nice shot of the eclipsed sun setting behind the mountains and a couple of my setup. http://www.drdale.com/temp Dale

From: Evan Zucker

Great photo of the setting sun, Dale. I'll bet there aren't too many days in your neighborhood where the sun is that bright so close to the horizon. I'm sending a copy of your photo to my brother. He lives in Portland, OR, and didn't bother looking at the eclipse despite the beautiful weather. He must be adopted <g>. EVAN

From: Kim <kimhay@kingston.net>

Hi Dale, Nice picture, thanks for sharing for those who could not see it, or attend. Kim

From: Olivier Staiger <olivier.staiger@span.ch>

Hi all, I also have some photos of the eclipse, as seen from Pond Inlet, Baffin Island, http://eclipse.span.ch/300700pix.htm I'd like to extend my thanks to Mark Margolis, president of Rainbow Symphony, who sent several hundred eclipse shades to Pond Inlet so we could share the event with the local folks. It was a big success. Some images of the day and kids looking at the sun are at http://eclipse.span.ch/300700.htm . Klipsi

From: <Kidinvs@aol.com>

Those photos were great... thanks for posting them Its also nice to hear about Mark Margolis from Rainbow. I, too, have had wonderful experiences with Mark, and its always nice to hear good things about other people that I have utmost respect for... Kudos to you, Mark Eric Brown

From: Patrick Poitevin <patrick_poitevin@hotmail.com>

Dear all, Indeed Mark Margolis is doing a great job. He is supporting the SEML since I started it in December 1997. Thank you Mark (and Rainbow Symphony) for the support but also a big thank you to Jan Van Gestel who is offering his server for all those years. Best regards, Patrick

Eclipse references

From: Michael Gill <eclipsechaser@yahoo.com> To: <SOLARECLIPSES@AULA.COM> Sent: Monday, August 07, 2000 3:36 PM Subject: [SE] Eclipse References

Some recent eclipse references:-

"Brightness during a solar eclipse" by David W. Hughes. August 2000 Journal of the British Astronomical Association vol.110, number 4, pages 203-205.

Also:-

"Observations and Predictions of Eclipse Times by Early Astronomers" by John M. Steele. ISBN 0792362985.

Michael Gill

GPS

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de> To: Finsternisliste <solareclipses@aula.com> Sent: Thursday, August 17, 2000 4:54 PM Subject: [SE] Eclipse calculation & GPS

Dear shadow-chasers, first I want to thank you for your help with my software problem. I got quite a few useful hints. Apparently it was really just the negative radius of the anti-umbra.

But I've got another question: I consider buying a GPS device for astronomic purpose, especially, of course, for next June. I want a plain handheld device that simply tells me where I am; I don't want to spend more money than necessary. No maps, no route planning, no toys: Just latitude, longitude, height. What do I have to look for? What features should it have? Can you even recommend me a certain device? How much (approximately) do I have to invest? Best regards Marc

From: Rigel (Peter Tiedt) <rigel@stars.co.za>

HI Marc Even the simplest devices have routes. My recommendation is the Garmin GPS 12. Simple, no frills, stores only 500 waypoints, but that is enough for me. Reliable. Vehicle mount available, (although I use velcro - much easier). Cigar lighter adapter available for using itin the car.

Batteries (4 x AA) last about 12 - 15 hours. Gives Lat, Long, Height, and works in metric, imperial and nautical. Compensates for hours ahead/behind UTC. 12 channel Works on various datums, but you will use WGS84 99.9% of the time. BTW - I have one of these and have been VERY happy with it.

From: Assoc Prof J R Huddle <huddle@nadn.navy.mil>

I bought the Garmin GPS 12XL in 1998. I bought that model because the salesman in the store I went to told me that the 12 did not have an averaging routine. That turns out to be incorrect. If you go to the Garmin website, you can see a comparison of the various Garmin models. Basically, the difference between the 12 and the 12XL is that the 12XL has a city database, audible alarms, capability to use an external antenna and it costs more. The list prices are US $231 and $309, but you can save significantly by searching the internet. I tried the Garmin E-trex for a few days earlier this summer. I did not like it, but I don't remember exactly why not. I think it was a bit too automatic, so there were some things I couldn't do. I also think the E-trex does not have an averaging mode. I also borrowed a friend's Magellan 315 back in June. This is a nice machine, but it automatically enters its averaging mode when it is held stationary. I did not like that feature, but it may not bother others. I only used the 315 twice, but both times I thought my Garmin 12XL pulled in the satellites better.

I have used the Garmin GPS 38 in the past - it is no longer available. The 38 has no averaging mode. I borrowed an Eagle Explorer a couple years ago. I didn't like it, but don't remember why. I don't think it had an averaging function. I think the averaging mode is a very useful feature, if you use it correctly. I like to let my 12XL average for five minutes, write down the coordinates, then average for another five minutes and write that down, and so on until I have 20 five-minute agerages. Then I average the 20 latitude readings and I average the 20 longitude readings. I think this procedure does about as well as you can do under eclipse observing conditions, unless you interface your GPS to a computer. It is quite clear from data I have taken that averaging 20 five-minute averages is better than averaging for 100 minutes. I'm trying to collect enough data to evaluate precisely how well you can do by following my "averaging the averages" procedure, but taking a

data set pretty well shoots an afternoon, so I'm not collecting data as quickly as I'd like.

Bottom line: I really like my Garmin GPS 12XL, but I think I'd be 99% as happy with a Garmin GPS 12, and it is cheaper. I recommend that you purchase several units, try them out and compare them, and then take back all but the one you like best for a refund. Or take them ALL back, then get the best deal you can by purchasing over the internet. Then, PRACTICE with the instrument before eclipse day! Best, Jim Huddle

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello Peter, Thanks for the advice :) Now, what does "12 channel" mean? Does it mean that the device can evaluate data from up to 12 satellites, thus achieving a higher accuracy? Are there are any other features affecting accuracy?

And are there differences in "sensitivity"? I mean, we once tried quite an expensive GPS device (a "Magellan-something") on a roof top and didn't get enough satellites to determine our position. Or is this what you called "Reliability"?

And what is WGS84? Sorry for asking so much, but I don't know much about GPS and don't want to end up spending lots of money on crap.

That's a good sign :) Best regards Marc

From: Assoc Prof J R Huddle <huddle@nadn.navy.mil>

Almost all currently-available GPS units allow the user to select a map datum. My GPS 12XL has lots of map datums to choose from. It seems to me it would be simple to include a routine in the GPS software to convert from one datum to another, but I don't think any company has implemented such a feature. Anyone know if you can do this? Maybe save coordinates as a waypoint, then switch datums and recall the waypoint? Has anyone tried this? I have not tried it yet.

Another feature on the 12XL I've found useful is sunrise/sunset. I can make my GPS calculate sunrise and sunset at any location on any day. (First contact is x minutes after sunrise....) Jim Huddle

From: Bill Kramer <bill@autocode.com>

I have the GPS 12XL and find it to be accurate only in a moving car. When standing still the elevation goes up and down - sometimes by over 100 meters at a single shot. And the coordinates also seem to be adjusting all the time. They are close, but not exact and keep switching around.

But when moving at 50 kph or faster it seems to be pretty decent. Of course, this is something not recommended on eclipse day except when going to the observation site!

Not sure if the model I've got is any indication of the reliability of these things, but the sales clerk said "they all act like that". The sales clerk did not strike me as an expert in these things either to be honest.

Another item is that they do not work well inside and need to be able to see the sky. While in a metal building, the system did not pick up any signals. Same with the middle seats of an airplane (I had to hold it near the window).

So did I get a GPS lemon? Have others experienced this rapid change in the elevation and coordinates with their units? Bill Kramer

From: Chris Watts <c.j.watts@totalise.co.uk>

12 channel means that it can pick up signals from 12 sateletes at one go, this improves the time it takes to get a fix on your position. If you have all 12 satellites you will get a fix nearly instantanous and it will preform better under limited visablity to sky. Unfortunately you can't always get 12

satellites in the sky at one time and you may notice that the fixing time goes up. With minimum of four satellites this can be in some instances upto 1 minute or 4 minutes from first switch on.

The sensitivity of the aerials vary from product to product, a good test is to switch them all on at the same go and see how fast it takes to get a fix. If you can display how many satellites the GPS has found all the better. But remember the number of satellites also depends on the time of day. Chris

From: Brian Garrett <mgy1912@home.com>

Check out the status screen when you notice the position data jumping around, and make sure you have a good lock on the satellites. I don't know about Garmin units, but my Magellan 315 tends to show the greatest errors and the biggest fluctuations at exactly the times that it loses its lock on the satellites. Remember, it has to be able to see at least three to give you latitude and longitude, and four to include the elevation. If you are only receiving one or two satellites strongly, there's part of your problem.

Also take a look at where the satellites are in the sky; results are generally best when you have a sat or two overhead, and several at roughly 45 degrees above the horizon in various directions. The worst results, in my experience, are when there is one bird nearly overhead and the rest near the horizon, or _none_ overhead and a large angle to the visible satellites, with only four or five above the horizon.

My Magellan also gets very accurate speed and direction readings when in a moving car, as long as it can see the sky through the windshield. I sometimes have to move it around a bit (keeping my eyes on the road of course) to give it the best view I can, but this is usually not a problem.

That sales clerk is full of buffalo chips. They do not "all" act like that. They do all show common types of error in adverse reception conditions, but as long as reception is good they should have no problems.

This is normal. All GPS units are lousy at picking up sat signals inside a building. Being near a window is helpful as long as there is nothing else out there to block the sky.

Mine generally fixes pretty quickly on latitude and longitude; lengthy averaging (thanks in no small part to the Pentagon finally turning off that damnable Selective Availability) generally does not improve on the coordinates my Magellan determines as soon as it can find 3 satellites. The altitude figure does go up and down quite a bit, however. I have read that altitude will always be the least accurate element of your position as determined by GPS, and that this is due mostly to "dilution of precision" which is usually a factor of satellite-to-viewer angles, as mentioned above.

Most of what I (think I) know about all this stuff comes from reading the sci.geo.satellite-nav newsgroup, and useful sites such as Joe Mehaffey's (http://joe.mehaffey.com/), which has lots of good info for beginners (like me) and experienced users alike. Brian Garrett

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello Peter, I thought about the e-trex, too: It's smaller, lighter, has a display with a better resolution, and can run longer on the same number of batteries. All that for the same price. But it's really not capable of averaging the position - I even asked Garmin themselves. And since I don't want any toys but just a reliable position I followed your advice and bought a GPS 12. You'll hear from my lawyer if I don't like it ;)

No, seriously: When I came home I went to my

window with the device. There isn't too much free view from here, but I got my coordinates within a minute. Think I'll have a lot of fun with this one :) Marc

Historical Eclipse

From: Ing. Francisco Guadarrama Sánchez To: SOLARECLIPSES@AULA.COM Sent: Friday, August 18, 2000 3:16 PM Subject: [SE] HISTORICAL ECLIPSE

Hi All. In "Le Roi de Fer" by Maurice Druon, a "historical novell", the author writes that the King of France "Philip the Fair" died on November 29, 1314 and that day there was an eclipse. I've checked and found there was'nt any eclipse in that date.Actually there was a total eclipse on November 8, 1314, but this wasn't visible in France. Because the author also says in that time in France was used the "French Method" or "Easter Method" for the current calendar and so the year begun by Easter, I wonder if really there was an Eclipse when this King died ?. Can anybody help me to clear this ?. Thank very much for your help. Francisco Guadarrama Sanchez

From: Jean-Paul Godard <jpgodard@cybercable.fr>

On 11/08/1314 there was a total eclipse (according to emapwin software). With a Delta T of 443 sec, Path of totality goes from florida to angola, passing over fortalezza in brazil (much of these points were not still discovered at this time).

Nothing was visible in Kingdom of France....

Gregorian calendar is in use in France from 12/09/1584 (following day was 12/20/1584.) Corrected date of the eclipse (julian calendar) is 10/29/1514 Perhaps an error of a month? Cordialement Jean-Paul Godard

From: Michael L. Gorodetsky <gorm@hbar.phys.msu.su>

Could it be lunar eclipse of 22/11/1314?

From: Olivier Staiger <olivier.staiger@span.ch >

I don't think so, it was only a penumbral eclipse, not visible , or just hardly. Olivier "Klipsi" Staiger

From: Ing. Francisco Guadarrama Sánchez

TO ALL ECLIPSE LOVERS & ECLIPSE GURUS

Concerning my query about the eclipse in 11/08/1314 and the data calculated by Jean-Paul GodardI think now we could guess why the writer Maurice Druon wrote in "Le roi of Fer" "the King of France Philip The Fair died on November 29, 1314 and this day was an eclipse" :

A).- If the "real date" of the eclipse", i mean the date in the Julian Calendar in use in that time was October 29 1314, as Jean-Paul Godard wrote, then it´s very probable the writer could have had an error and write November 29, 1314. However I think the date October 29 1314 was wrong because that day the Moon's age was 19.7 days and so can't be an eclipse. By the way, Jean-Paul, what does it mean "Corrected date of the eclipse (Julian Calendar)". I suppose you got this date subtracting 10 days from the date 11/08/1314, but it's not clear what this it mean.

B).- Another most probable explanation is that the writer tried to convert the Julian Date of the eclipse in 11/08/1314 to a Gregorian Date and so he added 11 days to 11/08/1314 and got 11/19/1314. After this he made an error and wrote 11/29,1314 instead of 11/19/1314. So far so good but a problem remains :

If really was an eclipse when the King died and this eclipse was visible in France then the value of Delta T of 443 secs was wrong. I know that Shinobu Takesako, the author of the Emapwin software used data from the book "HISTORICAL ECLIPSES AND EARTH'S ROTATION" by F.R. Stephenson and I wonder between what values Maximum and Minimum can change Delta T for the eclipse were visible in France ?. Can be an error here ?. The writer for his part is

very assertive and in his book adds an additional commentary about an astrologue Martin who predicted the eclipse and said with sibyline words " That day a great shadow will fall over the the Kingdom of France". I think is valuable to know the true here. If there are another independent historical testimonies about this eclipse we can fix the value of Delta T in that time. Thank very much for your answer. Francisco Guadarrama Sanchez

From: Brian Garrett

My understanding was that this eclipse was mentioned in an historical novel. Given that, it seems likely to me that this eclipse is entirely fictional, like the one in "A Connecticut Yankee in King Arthur's Court". Brian

From: Michael L. Gorodetsky <gorm@hbar.phys.msu.su>

There were no eclipses in 1314 visible in Europe. The eclipse of 1314/05/15 was in southern hemisphere and 1314/11/08 was in Africa. In this way, no DeltaT correction can help - it only rotates the Earth under the path of eclipse (which is however two small in the 14th century for every model of DeltaT to influence on the visibility - of the order of 10 seconds). The author could mean the eclipse of 29 October 1315 which was also unfortunately invisible in nothern hemisphere or penumnbral lunar eclise of 11/22/1314.

From: <KCStarguy@aol.com>

In this first issue of space illustrated on p.54 starry night by Bruce campbell

with starry night he checked out the dates and events reported by Geoffrey Chaucer at 14th century poet. The Franklin's Tale was his work.

Bruce proves the sun,moon allignment accounts for high tides at that time mentioned in the story for dec 19.1340. It was a partial eclipse or near so as the picture in the magazine illustrates. Then to 1/7/1610 and looking at Jupiter the Night Galileo first did Nice 2 page article with pictures.

Lunar Eclipse Photos

From: Ing. Francisco Guadarrama Sánchez To: SOLARECLIPSES@AULA.COM Sent: Friday, August 18, 2000 3:16 PM Subject: [SE] HISTORICAL ECLIPSE

Hi All. In "Le Roi de Fer" by Maurice Druon, a "historical novell", the author writes that the King of France "Philip the Fair" died on November 29, 1314 and that day there was an eclipse. I've checked and found there was'nt any eclipse in that date.Actually there was a total eclipse on November 8, 1314, but this wasn't visible in France. Because the author also says in that time in France was used the "French Method" or "Easter Method" for the current calendar and so the year begun by Easter, I wonder if really there was an Eclipse when this King died ?. Can anybody help me to clear this ?. Thank very much for your help. Francisco Guadarrama Sanchez

From: Jean-Paul Godard <jpgodard@cybercable.fr>

On 11/08/1314 there was a total eclipse (according to emapwin software). With a Delta T of 443 sec, Path of totality goes from florida to angola, passing over fortalezza in brazil (much of these points were not still discovered at this time).

Nothing was visible in Kingdom of France....

Gregorian calendar is in use in France from 12/09/1584 (following day was 12/20/1584.) Corrected date of the eclipse (julian calendar) is 10/29/1514 Perhaps an error of a month? Cordialement Jean-Paul Godard

From: Michael L. Gorodetsky <gorm@hbar.phys.msu.su>

Could it be lunar eclipse of 22/11/1314?

From: Olivier Staiger <olivier.staiger@span.ch>

I don't think so, it was only a penumbral eclipse, not visible , or just hardly. Olivier "Klipsi" Staiger

From: Ing. Francisco Guadarrama Sánchez

TO ALL ECLIPSE LOVERS & ECLIPSE GURUS

Concerning my query about the eclipse in 11/08/1314 and the data calculated by Jean-Paul GodardI think now we could guess why the writer Maurice Druon wrote in "Le roi of Fer" "the King of France Philip The Fair died on November 29, 1314 and this day was an eclipse" :

A).- If the "real date" of the eclipse", i mean the date in the Julian Calendar in use in that time was October 29 1314, as Jean-Paul Godard wrote, then it´s very probable the writer could have had an error and write November 29, 1314. However I think the date October 29 1314 was wrong because that day the Moon's age was 19.7 days and so can't be an eclipse. By the way, Jean-Paul, what does it mean "Corrected date of the eclipse (Julian Calendar)". I suppose you got this date subtracting 10 days from the date 11/08/1314, but it's not clear what this it mean.

B).- Another most probable explanation is that the writer tried to convert the Julian Date of the eclipse in 11/08/1314 to a Gregorian Date and so he added 11 days to 11/08/1314 and got 11/19/1314. After this he made an error and wrote 11/29,1314 instead of 11/19/1314. So far so good but a problem remains :

If really was an eclipse when the King died and this eclipse was visible in France then the value of Delta T of 443 secs was wrong. I know that Shinobu Takesako, the author of the Emapwin software used data from the book "HISTORICAL ECLIPSES AND EARTH'S ROTATION" by F.R. Stephenson and I wonder between what values Maximum and Minimum can change Delta T for the eclipse were visible in France ?. Can be an error here ?. The writer for his part is very assertive and in his book adds an additional commentary about an astrologue Martin who predicted the eclipse and said with sibyline words " That day a great shadow will fall over the the Kingdom of France". I think is valuable to know the true here. If there are another independent historical testimonies about this eclipse we can fix the value of Delta T in that time. Thank very much for your answer. Francisco Guadarrama Sanchez

From: Brian Garrett

My understanding was that this eclipse was mentioned in an historical novel. Given that, it seems likely to me that this eclipse is entirely fictional, like the one in "A Connecticut Yankee in King Arthur's Court". Brian

From: Michael L. Gorodetsky <gorm@hbar.phys.msu.su>

There were no eclipses in 1314 visible in Europe. The eclipse of 1314/05/15 was in southern hemisphere and 1314/11/08 was in Africa. In this way, no DeltaT correction can help - it only rotates the Earth under the path of eclipse (which is however two small in the 14th century for every model of DeltaT to influence on the visibility - of the order of 10 seconds). The author could mean the eclipse of 29 October 1315 which was also unfortunately invisible in nothern hemisphere or penumnbral lunar eclise of 11/22/1314.

From: <KCStarguy@aol.com>

In this first issue of space illustrated on p.54 starry night by Bruce campbell

with starry night he checked out the dates and events reported by Geoffrey Chaucer at 14th century poet. The Franklin's Tale was his work.

Bruce proves the sun,moon allignment accounts for high tides at that time mentioned in the story for dec 19.1340. It was a

partial eclipse or near so as the picture in the magazine illustrates. Then to 1/7/1610 and looking at Jupiter the Night Galileo first did Nice 2 page article with pictures.

Lunar Eclipse

From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, August 16, 2000 7:09 PM Subject: [SE] Report and Photos of July 16 Total Lunar Eclipse

I've just finished a new web page featuring my report and photos of theTotal Lunar Eclipse of July 16 as seen from Maui: http://www.mreclipse.com/LEphoto/TLE2000Jul16.html - Fred Espenak

Old Photos

From: ccmlt <ccmlt@wanadoo.fr> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, August 15, 2000 3:33 PM Subject: [SE] Old photos ...

Dear eclipse chasers ... I just come from my favorite bookshop where I found a very attractive book on early astronomical photos. This is a book in french printed in june 2000 by "editions de la reunion des musees nationaux", 49 rue Etienne Marcel, 75001 Paris.

"Dans le champ des etoiles - Les photographes et le ciel 1850-2000" ISBN 2-7118-4014-X Price is 190 FF (about 26 US$) This book is related to an exposition in "Musee d'Orsay", Paris about old astronomical photos : methods, results, 19 and early 20 centuries. There is a lot of eclipses photos ; most of them looks very strange for us. You can see :

- sun partial eclipse july 28, 1851 !
- sun partial eclipse may 26, 1854 (again !!)
- moon eclipse october 13, 1856 ... (more !!!)
- sun total eclipse july 18 1860 .. from spain
- sun total eclipse may 28 1900 ... from north Carolina
- moon partial eclipse april 11-12 1903
- sun total eclipse august 30 1905 from spain

Some of them are full page photos. Also you have december 8 1874 and 1882 Venus transits photos. But, unfortunately, most are dim photos ... And many other astronomical topics like moon, comets, nebulae ...

If you go to Paris before september 24, 2000 don't miss to go to the "Musee d'Orsay" and please, take a look at the original images ! Best regards Christophe, France.

From: Mark Friedman <MarkFriedman1@usa.net>

Christophe, Any suggestions on purchasing this book from the United States. I checked the Musee d'Orsay web site and its on-line store and could not find the book listed. Nor could I locate it on Amazon.com. Thanks, Mark

From: ccmlt <ccmlt@wanadoo.fr>

Hi Mark, Hi All, Any suggestions on purchasing this book from the United States. I checked the Musee d'Orsay web site and its on-line store and could not find the book listed. Nor could I locate it on Amazon.com.

Have you tried to contact the editor or maybe directly the Musee d'Orsay by email. Maybe they will find a solution for you ... Maybe you can try some bookshop in Quebec, and Pierre Arpin will give you some advices ... Thanks to him I forgot, for those of you who living in Germany or near Germany : this exhibition will be in Stuttgart, Staatsgalerie from december 23 2000 to april 1, 2001. Maybe another way to find the book, maybe in english late in the year ...

The last solution is I post it for you and other eclipse lovers interested directly from France. I will be in Canada for some days and return by early september. Best regards, Christophe

Polarimetry

From: Joachim Draeger <draeger@informatik.tu-muenchen.de> To: <solareclipses@aula.com> Sent: Thursday, August 24, 2000 12:56 PM

Subject: [SE] Q: Polarimetry

Hello everyone, I have a question concerning the observation of solar eclipses. It is rather common to make polarimetric investigations aiming at the corona. How about the chromosphere? Does (spectro)polarimetric work aiming at this part of the solar atmosphere make any sense? Joachim

From: <jmp@williams.edu>

The light we get from the solar corona comes from three sources:

1) The K-corona (K from the German for "continuous) is light from the photosphere scattered (bounced) off free electrons in the corona near the sun. The scattering process polarizes the light. Since the electrons are moving very fast, they Doppler-shift the light and blur out the Fraunhofer (absorption) lines from the photospheric spectrum.

2) The F-corona (F for Fraunhofer) is photospheric light bounced off dust in interplanetary space at or beyond the orbit of Mercury. This bouncing does not polarize the light (much), and does not broaden the spectral lines, since the dust is cool.

3) The E-corona is the set of emission lines, light emitted by the ions in the corona like 13-times-ionized iron, which comes only at temperatures of about 2 million degrees.

To analyze the electrons in the corona itself, we figure out what fraction of the coronal light is polarized, and attribute that to the K-corona. One of my own experiments in my Williams College team concentrates on that. Fred Clette from the Royal Observatory, Belgium, and colleagues organized a Europe-wide network to measure polarization.

The chromosphere light we see is emitted directly by gas in spectral lines such as that of hydrogen-alpha, which is emitted by relatively cool gas. The light is not polarized, so there is no reason to study the chromosphere through Polaroids. Jay Pasachoff

From: Assoc Prof J R Huddle <huddle@nadn.navy.mil>

My own personal feeling is that if you can take the data, someone somewhere will figure out how to analyze it sometime. Jim Huddle

Solar Stamps

From: Eric Pauer <pauer@sanders.com> To: Solar Eclipse Mailing List <solareclipses@aula.com> Sent: Wednesday, August 02, 2000 5:45 PM Subject: [SE] Solar Stamps from U.S. Postal Service

I just received my "Exploring the Solar System" souvenir sheet from the U.S. Postal Service. The sheet was released in July at the 2000 World Stamp Expo. This sheet contains five pentagonal stamps, each with a $1 USD denomination. The sheet is shown online at the address below. The "Exploring the Solar System" is the lower left part of the sheet, which can be purchased separately.

http://www.stampsonline.com/gallery/2000/spaceach.jpg

The top stamp shows the full corona during a total solar eclipse. Moving clockwise, the next one shows a cartoon depiction of the sun's internal/external structure. The third stamp shows the sun shining in space above the Earth's surface. The fourth is from SOHO's Extreme ultraviolet Imaging Telescope at 304 angstroms, showing a massive coronal mass ejection. The last is a photo of the sun in the blue sky, with some scattered clouds.

You can purchase these sheets online from http://www.stampsonline.com/. I was thinking of scanning my sheet to make a decent JPG/GIF for posting. If anyone is interested, let me know. Eric

Talmudic view on eclipses

From: Brian Garrett <mgy1912@home.com> To: <SOLARECLIPSES@AULA.COM> Sent: Sunday, August 06, 2000 8:27 PM Subject: [SE] Article on Talmudic view of eclipses

I came across this article while doing some research on the upcoming Jewish observance of Tisha b'Av. It deals with the spiritual meaning of solar eclipses as discussed in the Talmud. Nothing profound as far as astronomical content goes, but an interesting view of the social aspect of eclipses, regardless of your spiritual beliefs or lack thereof. http://aish.com/issues/sciencenature/Solar_Eclipse.asp Brian

From: Mark S. Margolis <rainbowsymphony@rainbowsymphony.com>

Interesting analogies, and metaphors but clearly someone who has never been touched by the experience of the actual event. I can think of many other ways to put a positive spiritual spin on an eclipse. The article does exactly what it is suppose to do...it opens the topic for debate and conversation.

From: Assoc Prof J R Huddle <huddle@nadn.navy.mil>

Interesting, but there is some info that is incorrect. Quoting from the article:

"EXERCISE CAUTION On a practical note: If you encounter a solar eclipse, even though the sun appears covered, don't look. The sun's corona is still as powerful as ever. People have gone blind after looking at an eclipse for as few as four seconds. There is no pain when the retina is being burned, and the resulting visual symptoms do not occur until at least several hours after the injury has occurred -- by which time it is far too late."

First, it is not the corona that damages your eyes. Second, most other sources indicate that it takes more than four seconds to do permanent damage to your eyes, even when staring directly at the photosphere. (Don? How long did it take to burn a crescent on your retina?) On the other hand, the point about there being no pain associated with photo-induced retinal lesions is well taken, although I believe that the visual symptoms usually show up more quickly than "at least several hours". (Don? Do you remember how long it took?)

Just goes to show that there is NO SUBSTITUTE for actually being there and seeing an eclipse with your own two eyes! Best wishes for clear skies and bright Perseids during the next week or so. Jim Huddle

11 August 1999

Germany Movie

From: Daniel Fischer <dfischer@astro.uni-bonn.de> To: <SOLARECLIPSES@AULA.COM>; <eclipse@hydra.carleton.ca>; <mepco-list@egroups.com> Sent: Wednesday, August 30, 2000 8:19 PM Subject: [SE] 1999 solar eclipse featured in German movie

Original footage of the August 1999 solar eclipse is being used twice in the new German feature film "im juli" that's now playing here. The producers had learned about the eclipse, and since they were shooting in Hungary anyway, they decided to record the event (under cloudfree conditions) and to write it into the script. Attached to this message is a statement from Wueste Film they sent me regarding these circumstances.

There was a discussion about solar eclipses in movies on one of the lists a while back - is a complete list available somewhere? And has there ever been a case where a real eclipse that happened to 'hit' a film crew was integrated into the script of a movie? Anyway, the corona is nice, but prominences are not evident. I'm really looking forward now to "SolarMAX", the new IMAX movie premiering this October, in which footage of the 1998 eclipse will be used! Daniel Fischer

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello, dear shadow-chasers, I've just watched "Im Juli". Well, the eclipse scenes are really very short, and the ground scenes during totality don't look natural to me. As usually it's complete nonsense when it comes to astronomy - they had full moon three days before a solar eclipse! Nevertheless, it's a great movie about an adventurous and weird journey. I'd really like to recommend it to you :) Marc

From: <NinaSandy@aol.com> To: <eclipse@hydra.carleton.ca>

Daniel: I was the one who talked about eclipses in movies: I came up with five:

1. Mr. Hobbs Takes a Vacation - Jimmy Stewart and his son see a partial eclipse which is mythical as to time and place (off coast of California in 1962)

2. Eclipse - soft porn movie set in Toronto for the 1994 (May 10) Annular eclipse.

3. A Connecticut Yankee in King Arthur's Court - another mythical eclipse in England saves our hero.

4. Dolores Claiborne - Steohen King used the 20 July 1963 eclipse in Maine for his psychological thriller. Very good shots of totality. AND finally:

5. Barabbas - this is where the Italian film crew used the 1962 total solar eclipse as a background for the crucifixion of Jesus scene. It worked but just barely.

Olivier Staiger mentioned a 1950's movie, The Day the Earth Stood Still, with another mythical eclipse caused by the radical changes in the earth's orbit caused by numerous nuclear explosions. I do not know of others. I would bet they exist, though. Sandy Sanders Richmond, VA

From: Daniel Fischer <dfischer@astro.uni-bonn.de>

Sure, there's "Matador" which climaxes in an eclipse scence, AFAIK. The Finnish city of Joensuu actually showed the movie during the big pre-eclipse festivities in 1990.

The Italian eclipse was in 1961 - did they use footage they shot specifically for the movie or did they get eclipse shots from someone else? If the former is true, it would 'tie' them with the "im juli" folks for umbral initiative.

Do you know in how far the eclipse played a role for the 'script' there?

Indeed, and this movie's eclipse scene is particularly bizarre: After the eclipse happens unexpectedly, the lead character snatches a camera from a bystander to take a picture... Daniel

From: <Skywayinc@aol.com>

I remember as a kid watching the campy television show "Batman" during the mid 1960s. One of the episodes began with Adam West (as Bruce Wayne) and Burt Ward (as Dick Grayson) looking through a very expensive 4-inch refractor with an equatorial mount and motor-driven clock drive (maybe it was a Unitron)? Bruce is showing Dick the rings of Saturn and then makes a casual remark about " . . . the total eclipse of the Sun" that will be taking place over Gotham City the next day (!)

To make a long story short . . . one of those super villains that Batman and Robin were always pursuing, managed to capture the "Dynamic Duo" and and place them on the roof of a local building where, at some precise moment, a giant magnifying lens would concentrate the Sun's heat and light upon the two of them . . . incinerating our heroes to a crisp. That was the cliffhanger of how the episode ended.

Of course . . . I remembered the casual remark that Bruce (Batman) made about the eclipse at the start of the episode, so I knew how things would turn

out. Sure enough, when the show returned the next night, Batman reminded Robin that a solar eclipse was to occur (coincidentally at the precise moment when they were supposed to fry under the huge lens)! During "totality" they showed some brief solar eclipse footage -- the duration apparently being just long enough for Batman and Robin to extricate themselves from their improbable predicament.

After they were free, Batman casually remarks (in Adam West's deadpan voice) to Robin that they were extremely lucky, because the next total eclipse over Gotham City " . . . would not recur for another 360 years!"

(Holy Besselian Elements Batman!) Anybody remember this?-- joe rao

From: Olivier Staiger <olivier.staiger@span.ch>

>> 5. Barabbas - this is where the Italian film crew used the 1962 total solar eclipse as a background for the crucifixion of Jesus scene.

it was shot specifically during the eclipse by the original team, with actors and lots of folks. That was a masterpiece: never before had a total eclipse been filmed for a feature movie . They had only one chance, they could not shout "Cut ! Do it again ! Take 25 !" . It was a challenge , as nobody knew what kind of aperture / exposure had to be used. If it was overexposed or underexposed it would have been a disaster.

> >> Olivier Staiger mentioned a 1950's movie, The Day the Earth Stood Still

sorry, I don't remember mentioning this one. Must be someone else.. ? (or am I getting old and loosing my memory ? DOH !) Olivier "Klipsi" Staiger

From: gessner <gessner@easynet.fr>

A French movie "La Mécanique des Femmes" shooting in Normandy last August also planned to include the eclipse. Award-winning DP (Director of Photography) Emmanuel Machuel asked me about focals, filters and scheduling. They shot successfully incoming and outgoing partiality but were clouded out during totality. Still, I'm told the footage will appear in the film, to be released next November in Paris (sorry: no idea what the title's got to do with the eclipse). Nicolas Gessner

From: <NinaSandy@aol.com>

Joe: I do remember that! I wondered if that was my overactive imagination or a real show! Thanks for reminding me about that? Eclipses in songs? Of course "You're So Vain" comes to mind. I was about 13 or 14 and would have gladly taken Carly Simon to any eclipse she wanted (but that was not the meaning of the song...) Any others?

From: <NinaSandy@aol.com>

Olivier, I thought it had to be you! The person who impersonated Staiger please come out quietly and nobody will get hurt....

You surely have another movie for us. Finally, i response to the 1994 soft porn movie Eclipse, I do not know what role the eclipse plays I just know the days leading up to the event in the setting. And the eclipse was annular in Toronto, just as it was in Oberlin, Oh when Nina and I saw it. Sandy

PS: If some expedition or eclipse cruise need a quick witted assistant, I'll go to Africa!

From: Eli Maor <emaor@suba.com>

Hi all, Well, I don't know about eclipses in movies, but some years ago there used to run a TV commercial for a pharmaceutical company called Tageman (or a similar spelling); it showed a solar eclipse just before totality, with the diamond ring looking quite dramatic. It was the only TV commercial I ever paid attention to! All best - Eli Maor

30 July 2000

Partial eclipse

From: barr derryl To: SOLARECLIPSES@AULA.COM Sent: Monday, August 07, 2000 11:56 AM Subject: [SE] 30 July Partial Eclipse

The sunset partial eclipse of 30 July was observed near the summit of Blue Mountain, Montana, by my brother, myself and our two spouses. The equipment employed was a Meade ETX 90 Maksutov-Cassegrain telescope with a Thousand Oaks type 2+ filter, Orion 11X80 binoculars with mylar filters, two cameras, 1 attached to the ETX and the other with a 500mm mirror lens filtered with a TO type 2. Blue Mountain is approximately 20 miles west of Missoula, Montana, and its summit is occupied by both a fire lookout tower and a University of Montana observatory. The observatory was unstaffed the night of the eclipse. Observatory personnel whom we had contacted a month prior to the eclipse had assured us that the event in question "would not amount to much." The fire lookout station was, however, quite busy. During a visitation to his tower during the afternoon of 30th, the officer on duty directed our attention to several wildfires burning within the observational radius of the tower. The many wildfires that are now burning at nearly an unprecedented rate across the Western United States are a disaster of the first magnitude and one can only hope that changes in the weather come to the aid of all of those struggling to extinguish them, but for the eclipse chaser at that specific moment the resulting smoke served to greatly enhance the effects of this sunset partial. Unlike the others reporting to the List, we were able to comfortably observe and photograph the setting sun 8 - 10 minutes before its disappearance without the need of filters. First contact was scheduled for 2:30:48 UT (20:30:48 MDT), but because of that inevitable cloud that always manages to position itself at the wrong place at the right time, the effect of this first lunar nibble was not observed until 3:31:27 (all times used in the report are GPS since our short wave equipment inexplicably decided not to work on the mountain top) Maximum eclipse was scheduled for 3:07:24 with sunset to occur at 3:11, but alas, in spite of our efforts to get high enough to level the distant mountains to the true horizon, we lost 7 minutes of the eclipse to the local horizon. According to our GPS readings we were located 46 degrees, 48.9 minutes north, and 114 degrees, 11.4 minutes west. Our altitude, confirmed by topo map, was 6340.' Estimates of maximum eclipse based upon both calculation and observation for our location were in the .30 magnitude range. One side benefit of this eclipse was the discovery of a delightful brown ale brewed locally called Moose Drool. But aware of the sad fate of that other team of observer-brothers from Chinese lore, we refrained from partaking until the eclipse itself was over and all pertaining ritual (taking down and storing equipment) had been duly performed. I will endeavor to make our pictures available to the List during the coming week. Best wishes for future eclipses. Derryl Barr

From: David Makepeace <imoon@interlog.com>

To the SEML list: I have just returned home from chasing the partial eclipse of 30 July up to Pond Inlet on Baffin Island, Canada, where we had wonderful clear skies for the event and where I had the pleasure of meeting our "Klipsi", Olivier Staiger, for the first time.

As the eclipse lecturer on a marine expedition from the west coast of Greenland to Canada's High Arctic, I had the deep pleasure of introducing 100 new people to our world of eclipses. Most were absolutely thrilled with the chance to see such an event, and with the help of Olivier's live webcast I understand that many of you caught

it as well. Don't miss your chance to hook up with Olivier!! Christmas in New York State anyone???!!!!! David Makepeace

From: Olivier Staiger <olivier.staiger@span.ch>

hi all, as I was surfing for images of the fantastic Perseid Aurora last saturday see http://spacescience.com) I found new images of July 30 solar eclipse at http://victoria.tc.ca/~rasc/rasc04.html . Nice animation ! Olivier "Klipsi" Staiger

25 December 2000

Christmas eclipse

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Sunday, August 06, 2000 3:21 PM Subject: [SE] next solar eclipse: Christmas Day ! Ho, Ho, Ho !

Ho, Ho, Ho ! The next solar eclipse occurs on Christmas Day ! ... and Klipsi plans to fly to New York for a live webcast . full story at http://eclipse.span.ch/251200.htm if you know of more organizations/people doing live webcast of this eclipse, please inform me. Thanks. The more north you travel the deeper the eclipse will be. Montreal and Quebec City get quite deep eclipses (deeper than New York), but the best is to travel to the city of Iqaluit, on Baffin Island, where you get a really nice eclipse, the Sun just grazing the southern hills. I have contacts there now (after my recent trip to Baffin Island) and we might get a webcast from there, too. Klipsi

From: Evan Zucker

That's a great plan, but, as a native New Yorker, I must warn you that the New York region is not known for its clear skies that time of year; just think of northern Europe in August <g>. Growing up in New York City I was clouded out of more astronomical events (mostly lunar eclipses) and occultations than I care to remember. That's one of the reasons I moved to San Diego. Although we only get a minor eclipse, at least we'll have a better chance to see it. Best of luck! Evan H. Zucker

From: <Kidinvs@aol.com>

...have no fear.. I predict clear skies for Xmas day (I have no scientific basis to do this, though) As a native NYer, I plan to see it from right here. ...and i suggest we have a little party to do it. I have lived here my whole life. Anyone looking to come here can feel free to ask me questions about the area.. I will try to help. PS... Xmas is wonderful in NY. Eric Brown

From: Peter Tiedt <Peter.Tiedt@npc-eagle.co.za>

Eric Can you make similar predictions for Africa on 4 Dec 2002? I would also love clear skies .... Peter

From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov>

Several days ago, I finished work on a new web page for the partial solar eclipse of 2000 December 25:

http://sunearth.gsfc.nasa.gov/eclipse/extra/PSE2000Dec25.html

There are several maps showing regions of visibility throughout North America.

There are also two tables of eclipse circumstances. One table is for the USA:

http://sunearth.gsfc.nasa.gov/eclipse/extra/PSE2000Dec25city1/PSE2000Dec25city1.html

The other table is for Canada, Mexico, Central America, the Caribbean and Atlantic:

http://sunearth.gsfc.nasa.gov/eclipse/extra/PSE2000Dec25city2/PSE2000Dec25city2.html

Each city in these tables is a link to a graphic which shows the times (in local time) along with a drawing of the eclipse phase at maximum.

There are predictions and graphics for nearly 300 cities.

Seasons greetings, four and a half months early! - Fred Espenak

From: Olivier Staiger <olivier.staiger@span.ch >

well, keep also in mind that this is "only" a partial eclipse, and that a certain number of clouds is actually very welcome, as it may allow to see the eclipse naturally filtered if there is just the right amount of clouds, and it also gives much nicer photographs of partial eclipse than if you just get pure yellow-black image from ND-5 filter.

I was in 1995 in Ecuador for the annular eclipse and I had lots of clouds, but not too much to get totally clouded out, and it was perfect ! One of my best ever photos was taken during a cloudy eclipse, see http://eclipse.span.ch/bird.htm Same in 1996 for the partial on Easter Island, with some clouds it gave nice photos.

With all those wonderfull skyscrapers in New York, Chicago, or about any city in USA and Canada, imagine all the great shots you can get, of the yellow crescent "on top" of the building ! How about a photo in Montreal showing the sun's crescent and , in front , the road sign "Crescent Street" ? Olivier

From: Bob Morris <morris@sce.carleton.ca>

> > How about a photo in Montreal showing the sun's crescent and, in front, the road sign "Crescent Street"

Or, given the orientation of the crescent, Devil Drive. :-) LRM

From: Evan Zucker

Actually, I took some pictures rather similar to this but during a lunar eclipse. It was the companion to the 10 July 1972 total solar eclipse. I spent the night of 25-26 July 1972 on the 86th floor observation deck of the Empire State Building -- along with Glenn Schneider and the New York City Amateur Observers Society -- observing the partial lunar eclipse. Evan H. Zucker

21 June 2001

BBC Website

From: Michael Gill <eclipsechaser@yahoo.com > To: <SOLARECLIPSES@AULA.COM> Sent: Friday, August 11, 2000 8:07 AM Subject: [SE] BBC website

The BBC website has a story on the 2001 African eclipse...

http://news.bbc.co.uk/hi/english/uk/newsid_869000/869630.stm

Michael Gill

Birding in Africa

From: Rigel (Peter Tiedt) <rigel@stars.co.za> To: <SOLARECLIPSES@AULA.COM> Sent: Monday, August 28, 2000 5:58 PM Subject: [SE] Birding and 2001/2002 in Africa

Is anyone planning on including birding during 2001 and 2002 in Africa? If so I can post (off list) a list of the Southern African best birding spots Peter

From: Rigel (Peter Tiedt) <rigel@stars.co.za>

For those with a keen interest in birding (as well as shadow chasing) - the following link is probably the best in South Africa.

There are multiple links available from the URL http://www.sabirding.co.za/

I will shortly make available on the Africlipse website (www.eclipse.za.net) a link to this page, a few other links, and a downloadable text file on southern African birding spots. Give me a week or so. Peter

Detailed roadmap

From: Rigel (Peter Tiedt) <rigel@stars.co.za> To: Solar Eclipse Mailing List <SOLARECLIPSES@AULA.COM> Sent: Monday, August 07, 2000 5:36 PM Subject: [SE] Detailed Road and National Parks Map of Southern Africa.

As promised a few days ago, here are the details of the MapStudio map book on southern Africa.

ISBN # is 1-86809-431-6
Price in ZAR is R110.00

The book contains over 50 pages of maps in full colour, with larger scale maps of areas of interest, such as National Parks and cities. Area covered is coast to coast Africa from 4 deg N southwards.

All cities (and towns and villages) are clearly marked, with road distances in Km. A Lat/Long grid (usually absent on road maps) is another feature. Like an idiot, I didn't get the scale, but is is a useful scale. The format of the book is about A3, and there is a usefyul index as well.

Approximate exchange rates:

ZAR1 = BEF 6.20
US$1 = ZAR 7.05
GBP1 = ZAR 10.40

I can bring a few of these to Antwerp if there is any demand - Kris has already requested one. Please let me know and I will bring to Belgium for you. Peter Tiedt

From: Stephen McCann <stephen.mccann@roke.co.uk>

...and here in the UK, you can buy this book online (www.bookbrain.co.uk) for £ 14.50 (~$21.75). I'm sure you can find it online in continental Europe and North America for a similar price if you can not wait until the Antwerp conference. Kind regards Stephen McCann

Eclipse cruise

From: Emmanuel Laurent <emlaurent2@yahoo.com> To: <solareclipses@Aula.com> Sent: Wednesday, August 30, 2000 4:51 PM Subject: [SE] Cruise for the 2001 solar eclipse

Dear All, I'm interested to know if there is any cruise on the Atlantic Ocean (or perhaps on the Indian Ocean) to observe the 2001 solar eclipse. If anybody have information (website, travel agency, ...), please give it to me!! Thanks, E. LAURENT

June 2001 partial eclipse

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM Sent: Monday, August 14, 2000 5:45 AM Subject: [SE] 21 June partial solar eclipse

I've been playing with my laptop again this weekend .... see http://eclipse.span.ch/210601pse.htm where I've just placed a few animations showing what the 21 June 2001 eclipse should like from various places that will not enjoy totality: Rio, Ascension Island, St.Helena, Johannesburg, Nairobi, Harare. Olivier "Klipsi" Staiger

New Book

From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, August 15, 2000 2:30 PM Subject: Re: [SE] New travel book

It's out NOW. Bradt Travel Guides Africa & Madagascar Total Eclipse 2001 & 2002 ISBN 1-84162-015-7 UK price 10.95 pounds sterling US Price $15.95 by Globe Pequot Press

It gives all the info you'll need to plan your own trip.

I just received a copy of this 164 page travel guide to the 201 and 2002 eclipses. It's filled with plenty of black and white maps of the eclipse path as well as relavent cities, tourist attractions, etc..

There's a brief introduction to eclipses and how to watch them. The rest of the book is organized into individual chapters on each African country in the path of either the 2001 or 2002 eclipse. You'll find lots of practical information for travelers (accodations, transportation, tourist attractions, camping, etc.) provided in the context of the two eclipses. The books' small physical size (5.5" x 8.5") makes it a handy reference to bring

on your African eclipse expedition.

I would strongly recommend it to all eclipse chasers heading to Africa for 2001 and/or 2002.

Sheridan Williams did a fine job as eclipse consultant and provided just enough technical information and maps to blend in nicely with the rest of the book. A good balance and a very useful reference. Great job Sheridan! - Fred Espenak

Rolling your own filter

From: Rigel (Peter Tiedt) <rigel@stars.co.za> To: Solar Eclipse Mailing List <SOLARECLIPSES@AULA.COM> Sent: Wednesday, August 09, 2000 4:20 PM Subject: [SE] Rolling your own solar filters

I am about to start with this project - filters are needed for binoculars (mine and my partner's), tele and standard lenses and a videocamera. What is the best film to use?

Baader Film?
Black polymer?
Aluminised Mylar?

Has anyone made their own filters using the "Baader Method"? Or should I go for glass? If so, who makes the best? Can anyone on the list help?? Peter

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

> > Baader film is absolutely the best, even better than the glass.

Well, I can't judge that - I only use Baader filters for naked-eye or binocular observations. So I can't say anything about Baader and larger telescopes or cameras. But I do like the colour of the solar imgae through Baader films. Of course, an orange image is nice and we needn't discuss a blue image, but I believe that Baader hardly changes the colour of the sun. It gets quite close to the colour I expect.

I also think that Baader film is quite easy to handle for binoculars. There is even an instruction how to make filters for binos and telescopes on the package :) Best regards Marc

Three items regarding Zambia

From: Daniel Fischer <dfischer@astro.uni-bonn.de> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, August 01, 2000 6:50 PM Subject: [SE] Three items regarding Zambia (and Zimbabwe)

1) Is there a fuel shortage in the region which could compromise plans for car-based eclipse expeditions? In the "Oil & Gas" section of the newspaper Iran Daily of July 27 it is reported that "the fuel is critically short" in Zimbabwe, where also the fuel prices have been hiked between 128 and 19 percent recently and "observers say the government is risking severe public unrest with what are the sharpest fuel price increases in years."

2) A cautionary horror story on why you MUST have a travel health insurance that includes free transfer back to your home country has appeared in the "Travel" section of the Sunday Times (of London) on July 30. A British family had to spend 20 000 British pounds to have an elderly relative rescued after he hurt himself badly running from elephants in the Luangwa Game Reserve in Zambia. The medical services both in Zambia and Zimbabwe charged thousands of pounds for operations and transport while the British government did nothing. It eventually took 13 days to bring the injured man back to Britain where he died a week later...

3) And finally I've received a road map of Zambia from amazon.de today, published by freytag & berndt (ISBN 3-85084-852-3). Its scale is 1 : 2 200 000 and it looks rather new, with many detailled maps of the major NPs on the back. Since our group plans a big journey with 4WD cars through the 'Wild West' of Zambia I'm wondering whether this one is the best map available at all (the geographical information could be better, for example) or whether one

can get higher-resolution maps in Lusaka, be it on arrival or by mail order from some agency or shop.

Daniel Fischer (just back from an astromomy conference in Iran)

From: Francis Podmore <fpodmore@yahoo.com>

With regard to point (1) of Daniel Fischer's email, YES at present there is a sever shortage of diesel in Zimbabwe, although when I left (temporarily!!)(to attend the IAU meeting in Manchester) there was no problem with getting petrol. But YES the price of petrol has just leaped up to Z$27 per litre (my wife said that was about a 30% increase) (but we're getting used to frequent increases of that sort of magnitude, which is why our inflation rate is around 50 - 60%)

BUT there' NO KNOWING whether there'll be a fuel shortage there (or in Zambia) next week let alone next year!!! You'll just have to watch the various news pages. www.rhodesia.com has about 10 - 15 news items every day about conditions in Zim. And www.lonelyplanet.com has a link to a collection of up-to-date travel reports/stories (unverified) from people travelling recently in Zimbabwe or Zambia

Other SEML readers may also know of links to up-to-date travel info - if so, please post them.

(3) MAPS - I'm v surprised if the largest scale map of Zambia is 1:2 200 000 - The Dept of the Surveyor General publishes maps of Zimbabwe down to 1:50 000 covering the whole country. And www.omnimap.com can supply maps of anywhere in the world - but they may not have complete coverage or be the most up-to-date.

From: Peter Tiedt <Peter.Tiedt@npc-eagle.co.za>

I will comment in the meantime - perhaps Francis and Peter K can fill more details in at a later stage ...

There is a fuel shortage - mainly because of a foreign currency shortage. However, things can change in the next 11 months, hopefully not for the worse. Generally, you are able to get fuel - may have to queue a bit tho'

Southern Africa has seen quite a few fuel hikes recently - about 30 - 40% in the last year.

2. Always to be recommended - I am even taking insurance for my trip to Antwerp ....

In SA, medical costs, although expensive, are still cheaper than in the US and Europe.

3. The Automobile Assn of SA publishes a 1:2.5M map of Zimbabwe which is very detailed. The code is MNE-15 and cost is ZAR8.95 - less than US$1.50. The AA does not publish a Zambia map, but perhaps the sister organisations in Zimbabwe or Zambia do. Perhaps Francis or Peter K can comment.

There is also a map book, published by MapStudio in SA, which covers Africa south of 4deg N. I posted the ISBN number here last year sometime, but will look it up at the booksellers again and repost. This map book is excellent value, and is quite large scale, certainly better than the AA map. Cost of this is about US$12.

If anyone wants to order, and is coming to Antwerp in October, I can possibly squeeze a few of either into my luggage. Cheers Peter

14 December 2001

Anybody going?

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Saturday, August 26, 2000 11:02 AM Subject: [SE] annular solar eclipse 2001

Hello all, I will most likely fly to San Jose Costa Rica for the annular solar eclipse december 14 2001. I am looking for a hotel with high tower / skyscraper, with balcony view to west . Does anybody from the list know San Jose Costa Rica ? Anybody else on the list has plans to come see this

one ? Olivier "Klipsi" Staiger

From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov>

Olivier I am organizing a one week tour to Costa Rica for this eclipse. We plan to observe the eclipse from the Guanacaste Peninsula which has the best weather prospects. Our hotel will be at or very near the beach where we will have a clear view down to the ocean/horizon (the partial eclipse is still in progress at sunset). Other stops on the itinerary will include San Jose, Arenal Volcano, and the Monteverde Cloud Forest (great birding).

When I have a complete itinerary and prices, I will post more. - Fred Espenak

23 November 2003

Antarctica

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, December 26, 2001 12:26 PM Subject: [SE] Antarctica 2003

for those preparing for Antarctica 2003 total eclipse, or wishing to prepare for it, Lonely Planet has just issued a second edition of its Antarctica travel guide. http://www.lonelyplanet.com/prop/antgd.htm#ant Olivier "Klipsi" Staiger